

IN THE CLAIMS:

1. (Currently Amended) A ~~batch~~ process for preparation of ampicillin comprising:

acylating 6-aminopenicillanic acid (6-APA) with a phenylglycine derivative ~~in the presence of~~ and an enzyme to form a reaction mixture wherein the process is carried out while

- i) ~~maintaining~~ the total concentration in the reaction mixture of 6-APA and ampicillin combined is substantially throughout the reaction, greater than 250 mM;
- ii) metering in partially the 6-APA and/or the phenylglycine derivative in the course of the acylation reaction to thereby maintain the concentration of dissolved 6-APA is lower than 300 mM throughout the reaction; and
- iii) ~~maintaining~~ the molar ratio of the total quantity of phenylglycine derivative to the total quantity of 6-APA is less than 2.5.

2. (Currently amended) Process according to Claim 1, wherein the acylation reaction is carried out while the total concentration of the 6-APA and ampicillin present in the reaction mixture is, substantially throughout the reaction, greater than 300 mM.

3. (Currently amended) Process according to any one of Claims 1 or 2, wherein the acylation reaction is carried out while metering in partially the 6-APA and/or the phenylglycine derivative to thereby maintain the concentration of dissolved 6-APA ~~is kept~~ lower than 250 mM throughout the reaction.

4. (Currently amended) Process according to claim 1, wherein the acylation reaction is carried out while the molar ratio of the total quantity of phenylglycine derivative to the total quantity of 6-APA is less than 2.0.

5. (Canceled).

6. (Previously presented) Process according to Claim 1, wherein the phenylglycine derivative is metered in as a salt of D-phenylglycine amide and an acid.

7. (Previously presented) Process according to Claim 6, wherein the phenylglycine derivative is metered in the form of a solution of D-phenylglycine amide.1/2 H₂SO₄ in water.

8-11. (Canceled).

12-13. (Canceled).

14. (Currently amended) Process according to Claim 1, which comprises charging wherein, in order to maintain the concentration of dissolved 6-APA lower than 300 mM throughout the reaction, a portion of the total amount of 6-APA is charged to the reaction mixture at the beginning of the reaction such portion providing a concentration of dissolved 6-APA less than 300 mM and introducing the remainder of the total amount is introduced during the remainder of the acylation reaction to maintain the concentration of dissolved 6-APA less than 300 mM.

15. (Currently amended): Process according to Claim 14, wherein the concentration of dissolved 6-APA is kept lower than 250 mM throughout the acylation reaction.

16. (Currently amended): Process according to Claim 15, wherein the total concentration of the 6-APA and ampicillin present in the reaction mixture is, substantially throughout the acylation reaction, greater than 300 mM.

17. (New) A process for the preparation of ampicillin by acylating a quantity of 6-aminopenicillanic acid (6-APA) with a quantity of phenylglycine

derivative and an enzyme in an aqueous reaction medium to provide a reaction mixture containing dissolved 6-APA; said process comprising

initially introducing a part of said quantity of the 6-APA and/or a part of the quantity of phenylglycine derivative into the reaction medium under conditions allowing ampicillin to be formed by the acylation reaction and,

thereafter adding the rest of the quantity of 6-APA and/or phenylglycine derivative, under conditions whereby ampicillin will continue to be formed by the acylation reaction, and

wherein the concentration of dissolved 6-APA in the reaction mixture is, throughout the acylation reaction, lower than 300 mM and the total combined concentrations in the reaction mixture of 6-APA and formed ampicillin is greater than 250 mM; and further

wherein the molar ratio of the quantity of phenylglycine derivative to the quantity of 6-APA is less than 2.5.